

REMARKS/ARGUMENTS

Favorable consideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-13 are presently pending in this application, Claims 1, 3, 4 and 8 having been amended by the present amendment.

In the outstanding Office Action, Claims 1-13 were rejected under 35 U.S.C. §103(a) as being unpatentable over JP11-273126 (hereinafter “JP ‘126”) in view of Nuss (U.S. Patent 5,789,750).

Claims 1, 3, 4 and 8 have been amended solely to clarify the subject matter recited therein. These claim amendments are not believed to narrow the original scopes of the claims, and no new matter is believed to be added thereby. If, however, the Examiner disagrees, the Examiner is invited to telephone the undersigned who will be happy to work in a joint effort to derive mutually satisfactory claim language.

Before addressing the outstanding Office Action, a brief review of Claim 1 as currently amended is believed to be helpful. Claim 1 according to the present invention is directed to an optical lens which has an optical material made of an SiC single crystal having a cubic structure. By providing such an optical material, the optical lens exhibits a significantly superior refractive index, i.e., 2.5 or more as compared to about 1.5 of a conventional optical lens and also a superior light transmissivity at wavelengths longer than 564 nm, thereby improving the optical efficiency of recording/reproduction to optical power from a light source.¹

The outstanding Office Action asserts that “it would have been obvious ... to produce lenses from SiC of Takeshi [JP ‘126] with a structure of cubic crystal as taught by Nuss.” However, it is respectfully submitted that in order to properly combine or modify references

¹ See Specification, page 10, lines 6-17.

for the purpose of the obviousness rejection, *the references must suggest the desirability of a proposed combination or modification beyond the mere fact that references can be combined or modified.*² CAFC established that ***substantial evidence*** of motivation or teaching must be shown for combining or modifying the references,³ and also that such modification requires ***“clear and particular evidence.”***⁴

More specifically, JP ‘126 does not teach or suggest “an optical material comprising an SiC single crystal having a cubic structure” as recited in Claim 1, but merely states that “as an ingredient suitable for forming such a solid immersion lens, there are *a diamond, strontium titanate, silicon carbide, a rutile, gallium phosphide, zinc sulfide, an arsenic sulfide, lithium niobate, a zirconium dioxide, silicon nitride, etc*” (emphasis added initalic)⁵ Nowhere does JP ‘126 provide any specific crystal structures, e.g., hexagonal, rhombohedral, or cubic, for silicon carbide or any other materials, nor does it provide any guidance to select one over another among such a broad selection of materials. Nuss is directed to an optical system employing terahertz radiation, and simply states that “[i]n the case of *GaAs, sapphire,*

² MPEP 2143.01, In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). See also MPEP 2144.08 III stating that “[e]xplicit findings on motivation or suggestion to select the claimed invention should also be articulated in order to support a 35 U.S.C. 103 ground of rejection Conclusory statements of similarity or motivation, without any articulated rational or evidentiary support, do not constitute sufficient factual findings.”

³ In re Gartside, 203 F3d 1305, 53 USPQ2d 1769 (Fed. Cir. 2000) (holding that, consistent with the Administrative Procedure Act at 5 USC 706(e), the CAFC reviews the Board's decisions based on factfindings, such as 35 U.S.C. § 103(a) rejections, using the 'substantial evidence' standard because these decisions are confined to the factual record compiled by the Board.).

⁴ In re Dembiczak, 175 F3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999) (“We have noted that evidence of a suggestion, teaching, or motivation to combine/modify may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved, although ‘the suggestion more often comes from the teachings of the pertinent references.’ The range of sources available, however, does not diminish the requirement for actual evidence. That is, the showing must be clear and particular.”) (emphasis added).

⁵ JP ‘126, paragraph [0007].

silicon substrates, high resistivity silicon lenses are especially preferred because of their low THz absorption, frequency independent refractive index, cubic crystal structure, and ease of cutting and polishing” (emphasis added in *italic*).⁶ In other words, for the characteristics such as low THz absorption, frequency independent refractive index, cubic crystal structure, and ease of cutting and polishing, Nuss specifies the use of “high resistivity silicon lenses” despite various other materials such as the ones listed in JP ‘126. Furthermore, each material is believed to exhibit different optical properties with different crystal structures. Thus, it is believed that the outstanding obviousness rejection based on JP ‘126 and Nuss lacks proper motivation “to produce lenses from SiC of Takeshi with a structure of cubic crystal as taught by Nuss,” but instead it is believed to be a product of hindsight guided by Applicants’ disclosure. It is therefore respectfully submitted that the structure recited in Claim 1 is clearly distinguishable from both JP ‘126 and Nuss and that JP ‘126 cannot be properly combined with Nuss in order to arrive at the optical material recited in Claim 1. Accordingly, Applicants respectfully request withdrawal of the outstanding obviousness rejection based on the proposed combination of JP ‘126 and Nuss.

Likewise, Claims 3, 4 and 8 are believed to include subject matter substantially similar to what is recited in Claim 1 to the extent discussed above. Thus, Claims 3, 4 and 8 are also distinguishable from JP ‘126 and Nuss.

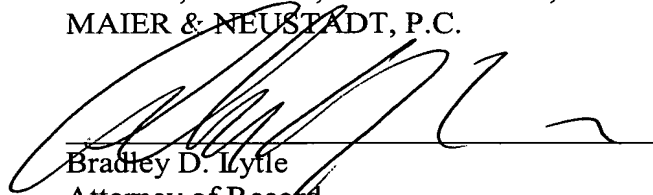
For the foregoing reasons, Claims 1, 3, 4 and 8 are believed to be allowable. Furthermore, since Claims 2, 5-7 and 9-13 depend directly or indirectly from one of Claims 1, 3, 4 and 8, substantially the same arguments set forth above also apply to these dependent claims. Hence, Claims 2, 5-7 and 9-13 are believed to be allowable as well.

⁶ Nuss, column 5, lines 49-54.

In view of the amendments and discussions presented above, Applicant respectfully submits that the present application is in condition for allowance, and an early action favorable to that effect is earnestly solicited.

Respectfully submitted,

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